

CLAIMS

1. A clear stable aqueous solution comprising an alkali metal silicate waterglass, a water soluble aluminate and a hydroxy carboxylic acid.
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2. A solution according to claim 1 characterised in that the water soluble aluminate is an alkali metal aluminate.
3. A solution according to either of claims 1 or 2 characterised in that the water
10 soluble aluminate is a sodium aluminate.
4. A solution according to any of claims 1 to 3 characterised in that the hydroxycarboxylic acid is an α -hydroxy carboxylic acid.
- 15 5. A solution according to claim 4 characterised in that the hydroxycarboxylic acid is selected from the group comprising tartaric acid, malic acid, gluconic acid, lactic acid, saccharic acid and citric acid.
6. A solution according to claim 5 characterised in that the hydroxycarboxylic acid
20 is citric acid.
7. A solution according to any of the preceding claims characterised in that the alkali metal silicate waterglass having a weight ratio $\text{SiO}_2:\text{M}_2\text{O}$ of from 2.0:1 to 4.0:1 where M represents an alkali metal cation.
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8. A solution according to claim 7 characterised in that the sodium silicate waterglass has a weight ratio $\text{SiO}_2:\text{Na}_2\text{O}$ of from 2.5:1 to 3.0:1.
9. A solution according to either of claims 7 or 8 characterised in that it further
30 comprises a potassium silicate waterglass

10. A solution according to claim 9 characterised on that the potassium silicate has a weight ratio $\text{SiO}_2\text{:K}_2\text{O}$ of from 1.43:1 to 2.05:1.
- 5 11. A solution according to either of claims 9 or 10 characterised in that the molar ratio of sodium ions to potassium ions is at least 2:1.
12. A solution according to any of the preceding claims characterised in that the molar ratio of silicon to aluminium is in the range 20:1 to 35:1.
- 10 13. A solution according to claim 12 characterised in that the molar ratio of silicon to aluminium is in the range 25:1 to 32:1.
14. A solution according to any of the preceding claims characterised in that the weight ratio of silica to alkali metal oxide is in the range 2:1 to 4:1.
- 15 15. A solution according to any of the preceding claims characterised in that it further comprises a polyhydric compound.
- 20 16. A solution according to claim 15 characterised in that the polyhydric compound is glycerol.
17. A clear intumescent interlayer characterised in that it has been produced by drying a solution according to any of claims 1 to 16 under controlled conditions.
- 25 18. An interlayer according to claim 17 characterised in that it comprises from 10 to 35% by weight of water.
19. An interlayer according to either of claims 17 or 18 characterised in that it comprises from 0.1 to 5.0% by weight of aluminium.
- 30 20. An interlayer according to any of claims 17 to 19 characterised in that the interlayer has a thickness of from 0.5 to 2.0 mm.

21. A glass sheet having an interlayer according to any of claims 17 to 20 on one surface thereof.
- 5 22. A laminated glazing which comprises one or more interlayers according to any of claims 17 to 20 and two or more sheets of glass.
23. A clear stable solution comprising a water soluble aluminate, a hydroxycarboxylic acid and a polyhydroxy compound.
- 10 24. A solution according to claim 23 characterised in that the aluminate is sodium aluminate.
25. A solution according to either of claims 23 or 24 characterised in that the hydroxycarboxylic acid is citric acid.
- 15 26. A solution according to any of claims 23 to 25 characterised in that the polyhydroxy compounds is glycerol.
- 20 27. A solution according to any of claims 23 to 26 characterised in that it has a pH in the range 9.0 to 11.0.

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